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ABSTRACT

Predictors of attrition from the nursing profession among graduates of an associate degree nursing program at Lakeland Community College, Ohio, were investigated during 1970-1979, based on an earlier study that identified predictors of attrition from the degree program. Two groups were evaluated: 91 nursing graduates for whom both file record and questionnaire data were available; and 228 graduates for whom only questionnaire data were available. Based on student interviews and a literature review, a 32-item questionnaire was constructed and pretested, and a version for graduates of the nursing program was developed. Based on analysis of file records, it was found that students who persisted and graduated had higher composite scores on the National League for Nursing examination, higher high school grade point averages, were more likely not to have come to the nursing program directly from high school, and were older than nonpersisters. In contrast, when looking at graduates for whom there were both a questionnaire and a file record. nursing graduates who stay in the profession could be distinguished from those who leave only on the basis of age. Graduates who entered the nursing program at an older age were more likely to stay in the profession after graduating. In addition, those individuals who perceived themselves as having a high degree of initiative tended to complete the nursing program and stay in the profession. No other major predictors of attrition from the college's nursing program appeared to be good predictors of attrition from the nursing profession. It is suggested that nurses with less realistic visions of their health care role do not remain in the profession. (SW)

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Predictors of Attrition Among Graduates of an Associate Degree Nursing Program

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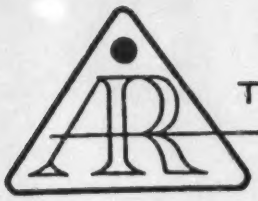

THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

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D. R. Coleman, Chairman
Forum Publication
Advisory Committee

Abstract

Weatherford observed in 1980 that the growing number of nonpracticing registered nurses was a major problem in the nursing profession. He found a forty percent dropout among nurses starting their first year of employment (secondary attrition).

In this study the authors examine secondary attrition relative to the graduates of the associate degree nursing program at Lakeland Community College. In an earlier paper we studied primary attrition or loss of students prior to graduation within this same program and identified certain key predictive variables distinguishing persisters from nonpersisters. The purpose of the present study was to determine whether any of these variables also help predict secondary attrition.

Only two variables were found to apply to both types of attrition: Age of entry and perceived initiative. Students who entered the nursing program at an older age were more likely to finish and stay in the profession. Those individuals who perceived themselves as having a high degree of initiative tended to complete the nursing program and stay in the profession.

Introduction

The American Journal of Nursing in 1982 indicated that presently 24 to 30 percent of nurses holding valid licenses were not employed in nursing. Other studies have reported dropout rates as high as 40 percent during the first year of employment (Weatherford, 1980).

The growing numbers of nonpracticing registered nurses resulting in continual hospital shortages and the loss of the training investment by educational institutions may be one of the more serious problems facing health/science education in future years.

The authors contend that the loss of practicing nurses from the profession is part of an attrition continuum beginning in nursing school with primary attrition, where nationally as many as 38 percent of students do not complete their training program (Donsky and Judge, 1981), and continuing into employment, where secondary attrition sets in and five years after graduation, according to the National League for Nursing, only 62 percent of registered nurses are still working in nursing (National League for Nursing, 1979).

In an earlier paper, the authors identified key predictors of primary attrition as it occurs in an associate degree nursing program at Lakeland Community College. The purpose of this paper is to ascertain the extent to which these primary attrition predictors help in predicting secondary attrition among Lakeland's nursing graduates.

Lakeland's Nursing Program

During the summer of 1979, the authors initiated a study of the background and performance of two-year associate degree nursing students from Lakeland Community College where, similar to the national average, the primary attrition rate since 1970 has averaged 30 to 40 percent per class.

Lakeland Community College has an open admission policy, but admission

into its nursing program is selective. The selection criteria include high school and previous college grade point averages and composite scores on the ACT and National League for Nursing (NLN) examinations.

Once admitted to the program, the student takes 18 months of nursing courses, including three courses in basic nursing and three courses in advanced nursing. The nursing courses cover content required by the Ohio State Board of Nursing and topics customarily found on the State Board Test Pool Examination. In addition to the 59 quarter-hours of nursing courses, students must complete 51 quarter-hours of other courses required for the associate degree. Academic dismissal from the nursing program results from accumulating a below "C" overall average or a below "C" average in science courses or obtaining more than one "D" in the nursing courses.

Approximately 97 percent of the nursing students are white. The mean average age at admission is about 25. Nine percent of the students are male and nearly 45 percent are married.

The Sample

The study was confined to students in the program from 1970 through 1979, excluding those admitted in 1979, since their completion or noncompletion was at that time unknown.

Data concerning the nursing students in the study came from two sources: College record files and a mail questionnaire. Those students for whom college record information was available composed one sample consisting of 251 former Lakeland students who entered in 1974, 1975, 1976, and 1977 and either graduated or withdrew from the nursing program by June, 1979. A second sample consisted of 232 students who responded to the mail questionnaire. They were former students who had entered the Lakeland program during the fall of 1970 or later and had graduated or withdrawn by June, 1979.

While these samples were appropriate for the study of primary attrition (Donsky and Judge, 1981), they had to be refined for the analysis of secondary attrition. This was done first by purging from both the file records and the questionnaire samples all nongraduates. Secondly, a merged sample was created consisting of graduates for whom both file record and questionnaire data were available. Third, in the original questionnaire sample the authors introduced additional questionnaires from graduates that had been received too late to be included in the initial study of primary attrition.

This entire reorganization process resulted in two samples for the study of secondary attrition. One consisted of 91 nursing graduates for whom both file record and questionnaire data were available and the other of 228 graduates for whom we had only questionnaire data.

The Study

In an earlier paper, the authors identified statistically significant variables that distinguished graduates from noncompleters using the initial samples already described. These differentiating indicators were drawn from a larger group consisting of both academic variables (quantitative measures such as ACT scores and grade point averages) found mostly in college record files and nonacademic variables (qualitative measures such as geographical characteristics and attitudinal variables) largely incorporated in the mail questionnaire. This questionnaire sought and provided interest, skill, biographical, attitudinal, and demographic information.

The process of questionnaire development initiated with interviews of Lakeland nursing students as well as graduates of the program where respondents were asked to identify those traits which seem to characterize the individuals who completed the program. These meetings were followed with interviews of program noncompleters as well as with nursing instructors.

Finally, the literature was examined for studies on the performance of nursing students in associate degree, baccalaureate degree, and diploma institutions. Research on success in licensed practical nursing programs was reviewed. Investigations concerning student attrition in colleges, adult education programs, and high schools, which were reported in the literature were noted.

Based on the interviews and review of the literature, 88 items which contained the factors that seemingly could be associated with attrition in the Lakeland nursing program were constructed. With the assistance and coaching of an experienced and skilled questionnaire writer, the 88 items were transformed into 84 items which could be answered using a Likert type scale. Parallelism, crispness, and clarity were emphasized.

Following the conventional scale construction process, the 84 items were submitted to fifteen "experts" at Lakeland for evaluation. Each item was rated on a basis of one to five in order to indicate the extent that each item would differentiate between persisters and nonpersisters. The experts included the dean of students, the director of nursing, two directors of admission, two educational psychologists, three counselors, and six nursing instructors. Thirteen reports were returned. Based on the assessment of the thirteen reports and modifications offered by the respondents, the preliminary form of the questionnaire which consisted of 32 items was constructed.

As a pretest the questionnaire was given to a group of first-year nursing students, after which each was asked to comment on its clarity and ambiguities. An English instructor reviewed the questionnaire. The comments from the students and the instructor were considered in the development of the final form of the questionnaire. This final form was mailed to 672 former students (467 graduates and 205 nonpersisters), of which 232 replied. There were two ver-

sions of the final questionnaire--one for graduates and the other for nonpersisters. The graduate version was identical to the one received by noncompleters with the exception that it contained some additional questions which were directed to occupational persistence in nursing. These additional questions allowed for the later resorting of samples and the study of secondary attrition.

The Results

Table 1 summarizes the statistically significant variables for predicting primary and secondary attrition drawn from an analysis of the file records. The reader will note that in the case of graduates versus noncompleters the NLN composite rank and high school GPA are significantly different for the two groups, as represented by the t values. In the case of nonacademic variables, admission pattern and age significantly differentiate the two groups.

In summary, the students who persist and graduate have had higher NLN composite scores, higher high school GPAs, were more likely not to come directly from high school, and were older than nonpersisters.

In contrast, when looking at the merged sample (graduates only for whom there were both a questionnaire and a record analysis), nursing graduates who stay in the profession can be distinguished from those who leave only on the basis of one of the four predictors of primary attrition: Age range. Graduates who entered the Lakeland nursing program at an older age were more likely to stay in the profession after graduating.

Table 2 lists nonacademic variables from the questionnaire analysis that significantly differentiate in the cases of primary and secondary attrition. It may be noted that persisters tend to have had better study habits, a significantly higher expression of perseverance/initiative, and a more realistic view of the nursing profession grounded in practical licensed nursing experi-

ence prior to admission.

With the exception of significantly higher perceived initiative as students, none of the predictors of primary attrition drawn from the questionnaire helps predict secondary attrition.

Analysis and Review of Literature

The predictors of primary attrition in our study shed little light on the later phenomena of secondary attrition. In fact the findings of the study seem to suggest that should an educational institution act to maximize student retention through including significant predictor variables in the selection process, it may have no impact on increasing the number of practicing nurses in the profession.

Other recent studies attribute secondary attrition to either of two causes: Family obligation or working conditions. In the case of family obligations, Willis, in her 1967 dissertation, revealed that one of the most frequent reasons for leaving nursing had to do with marriage, pregnancy and home problems. Brown, in her 1978 dissertation, found that nurses with children under six years of age worked less while other nurses tended to work more. Roos, in a 1979 report, offered reasons for unemployment and nonparticipation by registered nurses; he asserted that it is generally agreed that the maternity cycle is a factor.

A 1979 National League for Nursing Career Pattern Study pointed out that the reasons most frequently cited for nurses not working were the need to be at home to care for children, no financial necessity to work, and other family needs (National League for Nursing, 1979). Goodall in 1980, reaffirming Willis' earlier work, revealed recent data which showed the reasons why nurses leave hospitals. The study found that 15 percent of the nurses left for family, marriage, or pregnancy purposes. Finally, Fogarty in 1980 reported that the presence of young children in the home and marriage, with the resulting demands

of a wife's role, pose substantial barriers to employment for nurses.

It is worth noting that the importance of family obligations in causing nurses to leave the profession is supported by the findings of this study which show age as one of the few predictors of both primary and secondary attrition. Students admitted to the Lakeland program at an older age are more likely to finish and to stay in the profession. Younger students who graduate are more likely to be of child bearing age and probably start to inherit increased family obligations about the time they enter the profession.

Other factors as possible causes for nursing shortages and high attrition are related more to the conditions on the job. One of the earliest reported studies on job satisfaction among nurses was published by Nahm in 1940. She reported that the most important factors which differentiated satisfied and dissatisfied nurses were: Interest in work, general adjustment of the individual, relationships with superiors, hours of work, income opportunities to advance, and clerical aspects of the job. Maryo and Lasky in 1959 offered reasons why nurses leave their jobs. These included poor utilization of personnel, and dissatisfaction with salaries and hours. According to Kramer in 1972, the job dissatisfaction experienced by nurses is caused by the disparity between the self-actualization emphasized in the collegiate nursing program and the bureaucracy of health care institutions. Kramer in 1974 described and referred to a disillusionment with the career and reality shock as factors which can and do provide employment barriers. Roos, in his 1979 report on reasons for unemployment of nurses, cites dissatisfaction with work as a major factor.

Nurses who leave nursing do so because of undesirable working conditions according to Wandelt (1980). She cites such specific job dissatisfaction factors as the lack of administrative support, lack of autonomy, the inflexibility of working conditions and the tension of not having a say over your own actions

and not having confidence that patients are getting safe care. Hallus in 1980, when reporting on the reasons nurses gave for leaving jobs, stated that the number one problem is steadily diminishing patient contact due to an increase in other work demands such as burgeoning paper work. Other factors she claimed were significant include salary, poor leadership, and lack of unity. White in 1980 stated that more than 50 percent of nurses enter nursing because it provides a job as a means of support or offers a chance to deliver patient care. Then they find that the realities of the working world are not what they expected. The nurses are frustrated, shown little respect, under-utilized and over-worked. Wandelt, Pierce and Widdowson in 1981, in discussing the results of their questionnaire designed to understand the nursing shortage, suggest factors such as inadequate salaries, too much paper work, lack of administrative support, undesirable working schedules, and an environment not conducive to a sense of worth, and in general, work settings and conditions which interfere with the practice of nursing.

Once again there appears to be consistency between the literature and the findings of our study. We noted that primary attrition was linked to having a view of nursing grounded in reality. Students with practical nursing experience, a willingness to deal vigorously with the everyday demands of education, and a motivation linked to a knowledge of the job opportunities in nursing were more likely to finish the program.

While the results of this second study do not speak to the issue of grounding in reality and secondary attrition, the literature does. Wandelt, Kramer and other stress disillusionment, reality shock, and generally undesirable working conditions for many nurses in the field. Nurses unable to match their vision of a health care professional who spends the majority of time directly providing health services with the realities of a largely bureaucratic position steeped in

paper work leave the profession.

Just as we should see attrition as a continuum beginning in school and continuing after entry into the profession, we should also see an idealistic-realistic dichotomy distinguishing persisters from nonpersisters in both primary and secondary attrition. This distinction has been noted in the study of other health professionals. Howard Becker, in his classic study of the medical students at the University of Kansas, Boys in White: Student Culture in Medical School (1961), noted that successful medical students continually put aside their idealism in favor of the practical concern of "getting through" and that this process continues through the various stages of training into internship and early practice.

Conclusion

With the exceptions of age and perceived initiative, the major predictors of primary attrition appear not to be good predictors of secondary attrition among Lakeland Community College graduate nurses.

While most studies of nursing dropout from the profession cite conditions external to the formal educational process, i.e. family obligations or working conditions, there is an important link. Just as students with less realistic views of a nursing career do not persist in the rigors of the training process, nurses with less realistic visions of their health care role do not remain in the profession.

Educational institutions generally and nursing programs specifically may impact on both primary and secondary attrition through instituting career courses both early and late in the training process. These courses should socialize realistic career models and expectations.

Educators, especially health science ones, and their selection committees would do well to recognize and accept a more encompassing responsibility than

stemming attrition in an R.N. program. The futility of working to assure reduced attrition in a nursing program without concern for minimizing attrition in the nursing profession implies a limitation in the perceived scope of the chronic and severe nursing shortage. The authors' studies suggest that educators must look beyond the significant predictors of nursing program attrition and redesign selection procedures to bring into nursing programs students who not only successfully meet the challenge of the academic arena, but also survive and continue to function productively in their profession.

TABLE 1

File Records Analysis

	Primary Attrition: Graduates vs. Noncompleters				Secondary Attrition: RNs Who Stay vs. Those Who Leave			
Academic	N 251	Mean Diff.	t value	Sig. Level	N 91	Mean Diff.	t value	Sig. Level
NLN Composite Rank		9.95	2.13	.03		13.1	1.35	.18
High School GPA		0.80	2.78	.01		00.35	-1.12	.27
Nonacademic	N 251		Chi-square	Sig. Level	N 91		Chi-square	Sig. Level
Admission Pattern			4.28	.05			1.78	.18
Age Range			5.47	.02			7.74	.05

TABLE 2

Questionnaire Analysis

Nonacademic	Primary Attrition Graduates vs. Noncompleters. N	Chi-square	Sig. Level	Secondary Attrition RNs Who Stay vs. Those Who Leave N	Chi-square	Sig. Level
Licensed Practical Nursing Experience	232	4.04	.050	228	0.45	.500
Attitudinal Responses						
Had Perseverance		44.67	.001		4.76	.190
Had Initiative		24.45	.001		9.14	.027
Good Peer Interaction		9.32	.030		5.77	.122
Desire to Become Nurse		10.23	.020		0.91	.823
Good Relations with Father		13.45	.010		1.88	.600
Intellectual Achievement Valued in Home		21.46	.001		0.23	.973
Parents Had Interest in High School Activities		7.84	.050		0.64	.886
Good Associative Learning Skills		14.17	.010		0.80	.850
Poor Test Taking		19.66	.002		1.25	.741
Poor Class Attentiveness		57.69	.001		2.94	.402
In Nursing Because of Job Availability		8.84	.030		0.09	.990
Conflicts over Commitment to Education		44.04	.001		0.47	.920
If Nursing Training Were Different than I Thought, I Would Leave Program		9.32	.030		0.53	.910
In Nursing to Serve Humanity		18.35	.001		1.69	.640
Financial Problem Could Cause Me to Leave Program		28.71	.001		2.80	.420
Interested in Nursing Most of Life		18.00	.001		1.04	.790

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